

### Remarks

The Examiner's reconsideration of the application is urged in view of the further amendments above and comments which follow.

Taking the matters raised by the Examiner in turn, the Examiner first has objected to the drawings as set forth in the section spanning pages 3 and 4 of the Office Action. Reconsideration is requested in view of the following.

### Drawings

Referring to claim 148, the Examiner requests that the feature of positioning reading heads over a sample site should be shown in the drawings. Figure 2 shows a multiple micro site assay 22 supported by an XY stage 20. The only possible change to Figure 2 to illustrate positioning of reading heads over a sample site would be to move the XY stage 20 so that it is shown to be supporting the assay 22 on the opposite side. It appears unnecessary to amend Figure 2 to show this alternative position of XY stage 20 by dashed lines, for example, or to illustrate this in a separate amended version of Figure 2.

Applicants note that 37 CFR 1.83(a) is a rule that is governed by 35 U.S.C. §113, 35 U.S.C. §113 states that the "applicant shall furnish a drawing where necessary for the understanding of the subject matter sought to be presented." The specification, --  
-REFERENCE TO SPECIFICATION SHOWING FEATURE --- clearly ---  
shows/describes FEATURE--. Accordingly, contrary to Examiner's understanding, it is not necessary that the "drawings must show every feature of the invention specified in the claims." Should the Examiner have another understanding, Applicants request that Examiner provide a rationale and authority for such understanding.

An objection is also raised on the basis that the features of claim 151 are not shown in the drawings. The comments of the immediately - preceding paragraph also apply here.

Finally, a further objection is raised that the features of claim 152 are not shown in the drawings. However, this feature is embodied by the fibre optic cables 40 shown

in Figure 5, and is described in the second paragraph on page 21 of the PCT specification for this case. Nothing more is, therefore, required.

### **Claim Clarity**

Next, the Examiner has objected to informalities in claims 119, 137, 138, 141 and 145. First, it is asserted that there is no basis for the additional shutter means of claims 137, 141 and 145 in the specification. The examiner refers to the last paragraph on page 16 in this regard and alleges that it describes only one shutter means. However, the additional/further shutter means of these claims was disclosed in claim 38 as filed in the original PCT Application, and is also referred to in the first complete paragraph on page 16 of the PCT specification.

Referring to the Examiner's comments regarding claim 138, the "filter means" feature has been deleted from claim 138.

Regarding the Examiner's comments directed to claim 119, the word "spectral" has been deleted from the claim.

The Examiner then commences with claim rejections at the bottom of page 4 of the Office Action and continuing through page 9. While the indicated allowability of claims 137-139 is gratefully acknowledged as set forth in the paragraph at the bottom of page 9, it is submitted that all claims, as cast, are allowable, and the Examiner's further reconsideration is requested.

### **Claims 148-153 - Rejection under 35 U.S.C. §102**

It is specified in independent Claim 148 that a plurality of independently adjustable reading heads are provided so that they can be accurately positioned relative to respective sample sites. This feature is supposed to be disclosed in Volcker. However, the Examiner merely cites the entire reference without indicating where this feature is disclosed. Applicants can see no suggestion of such a feature in Volcker, and believe the claims to be allowable thereover. If the Examiner disagrees, identification of where Volcker so-discloses would be appreciated.

#### **Claims 110-111 - Rejection under 35 U.S.C. §103**

The content of these claims is asserted to be obvious in view of Volcker, in combination with Tiziani and Dandliker. However, a combination of three references without any motivation or suggestion for doing so cannot be said to be obvious, without sight of the claimed invention. Furthermore, it does not appear that this would be a routine combination to make, as the Tiziani reference concerns the use of confocal microscopy to measure surface topography of a 3D structure, rather than analysis of fluorescence from an array of samples.

The Examiner argues that the claimed arrangement would be arrived at by switching the positions of the detector and the sample in the system of Volcker. However, it is not apparent how such an arrangement could function correctly, as the minilens array would then be facing the detector 6 rather than corresponding samples in the microtitre plate 1.

For the above reasons, the Examiner's rejections of claim 110 do not seem reasonable, and the claim should be allowable.

#### **Claims 112-136 - Rejection under 35 U.S.C. §103**

The subject matter of these claims is said to be obvious over Volcker in view of Tiziani. However, claim 112 includes the feature which is acknowledged by the Examiner as allowable in relation to claim 137, namely provision of apertured masks on either side of a filter in front of the detectors. Accordingly, claim 112 and its dependent claims 113-136 should be allowable, and reconsideration is urged.

#### **Claim 140 - Rejection under 35 U.S.C. §103**

This independent claim is grouped together with claim 112 and its dependent claims in the Office Action, although the Examiner does not appear to have commented specifically on it.

Provision of a beam splitter in the optical path between the objective lenses and the focusing lens as defined in claim 140 is not disclosed or suggested in the prior references relied on by the Examiner. In Volcker, a beam splitter is provided, but is included further down the optical path, such that excitation radiation directed by the beam splitter needs to pass through three more optical elements than in the arrangement claimed in the present application, before it is incident on the samples. This may attenuate the excitation beam to some extent. Claim 140 is therefore submitted to be allowable.

**Claim 144 - Rejection under 35 U.S.C. §103**

Like claim 140, this claim is grouped together with claims 112-136 in the Office Action, but the Examiner has not commented specifically on its content.

This claim specifies that the detector array comprises “an array of photomultipliers, one photomultiplier for each of the optical paths”. This feature is neither disclosed nor suggested by the references relied on by the Examiner, and the claim is therefore submitted to be allowable.

**Claims 141-143 - Rejection under 35 U.S.C. §103**

Like method claim 140, claim 141 specifies that a beam splitter is interposed in the optical path between the objective lenses and the focusing lens. In alleging that claim 141 would have been obvious, the Examiner has not commented on this feature. As noted above in relation to claim 140, it is submitted that it provides a patentable distinction over the cited references.

**Claims 145-147 - Rejection under 35 U.S.C. §103**

Like claim 144, independent apparatus claim 145, includes reference to a detector array comprising an array of photomultipliers, one photomultiplier for each of the optical paths. The Examiner notes that the detector array in Volcker is a CCD array, and asserts that this is equivalent to an array of photomultipliers. However, no support is provided for the apparent assertion that it would have been obvious to replace a CCD array by an array of photomultipliers. Furthermore, no teaching is

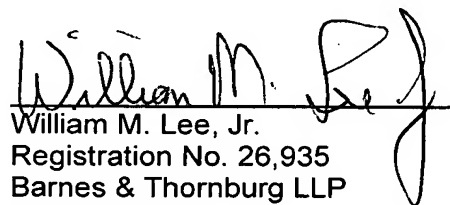
referred to which specifies provision of one photomultiplier for each of the optical paths. Claim 145 and its dependent claims are thus submitted to be allowable.

The Examiner's further and favorable reconsideration of the application is therefore urged. If anything remains for consideration, however, a telephone interview is requested. The Examiner is thus urged to contact the undersigned at the telephone number set forth below for arranging for such an interview.

Further action by the Examiner is therefore awaited.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "William M. Lee, Jr.", is written over a horizontal line.

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